

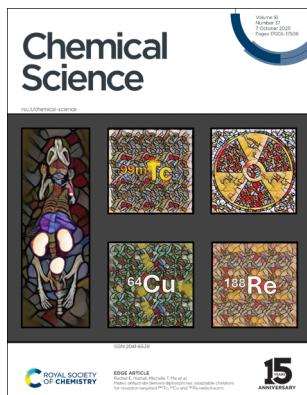
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ISSN 2041-6539 CODEN CSHCBM 16(37) 17005–17508 (2025)



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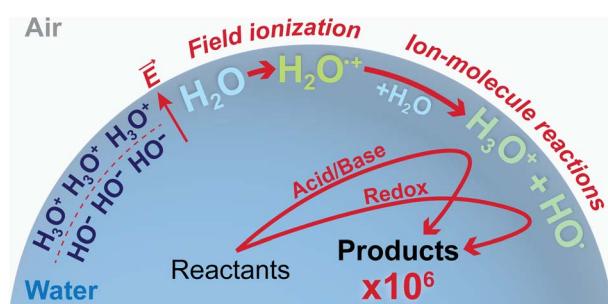
See Dillip Kumar Chand et al., pp. 17127–17138. Image reproduced by permission of Dillip Kumar Chand from *Chem. Sci.*, 2025, **16**, 17127.

PERSPECTIVES

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Mechanisms of ionization and of chemical reactions in charged microdroplets

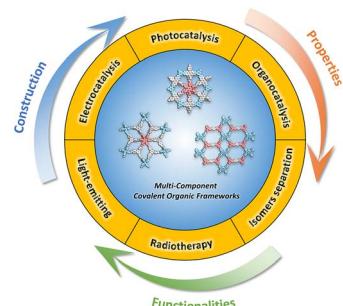
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Multicomponent covalent organic frameworks: design strategies and synergistic functions

Xiaoyi Xu and Ning Huang*



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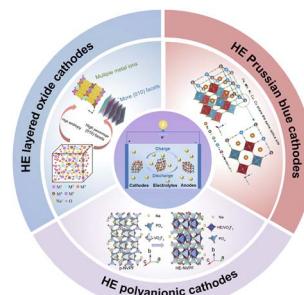


REVIEWS

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Formulating cathode materials based on high-entropy strategies for sodium-ion batteries

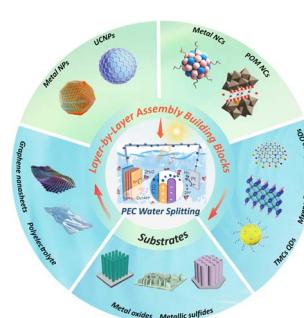
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Layer-by-layer assembly: an emerging, tailored and robust platform for solar water splitting

Wen-Cheng Liu, Yan-Qing Cai and Fang-Xing Xiao*

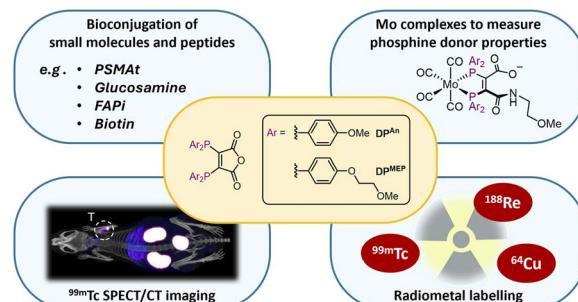


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Maleic anhydride derived diphosphines: adaptable chelators for receptor-targeted ^{99m}Tc , ^{64}Cu and ^{188}Re radiotracers

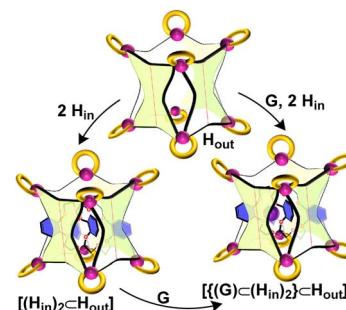
Rachel E. Nuttall,* Ingebjørg N. Hungnes, Truc T. Pham, Oliver W. L. Carter, Alex Rigby, Natasha Patel, Zilin Yu, Julie Cleaver, Jennifer D. Young, Gary J. R. Cook, Lefteris Livieratos, Jane Sosabowski, Hong Hoi Ting, Nicholas Vetter, Paul G. Pringle and Michelle T. Ma*



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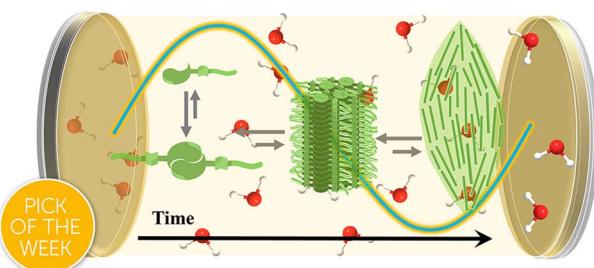
Hosting of $[\text{Cs}(\text{crown ether})_2]^+$ type host–guest complexes by a nano-sized molecular cuboid

Manaswini Ray, Shobhana Krishnaswamy and Dillip Kumar Chand*



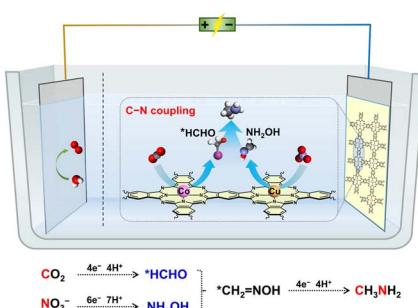
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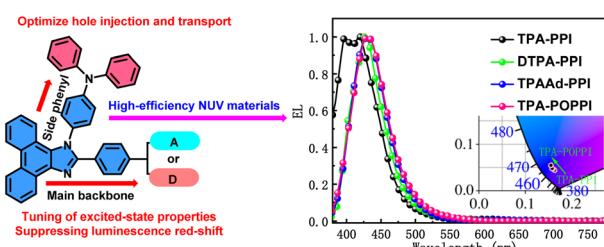
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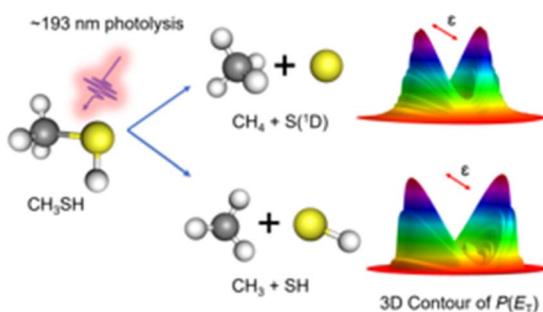
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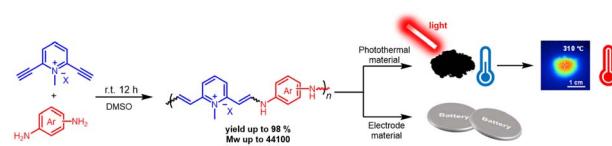


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Spontaneous amino–yne click polymerization enabled by pyridinium-activated alkynes toward p–π conjugated ionic polymers

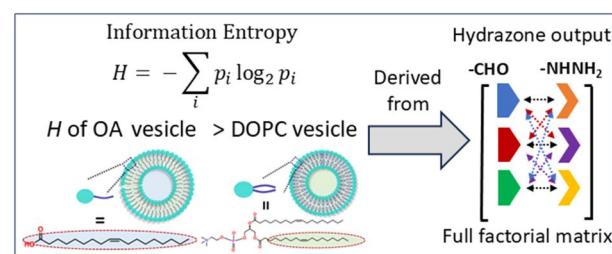
Chunyang Li, Guoqun Zhang, He Xu, Linjing Wei, Wuhua Liu, Kaiwei Zhang, Bingnan Wang, Chengliang Wang,* Anjun Qin* and Ben Zhong Tang



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Decoding information entropy of fatty acid and phospholipid vesicles via ordering combinatorial output of hydrazones

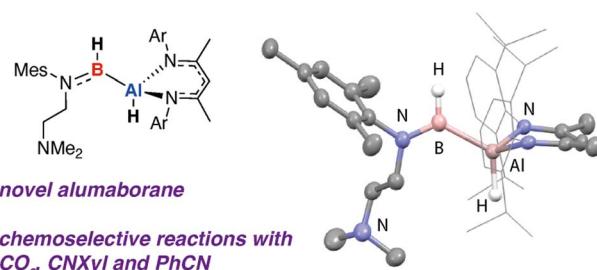
Reena Yadav, Niranjani Adikessavane, Rishi Ram Mahato and Subhabrata Maiti*



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Synthesis, properties, and chemoselective reactions of an AlH–BH functional group

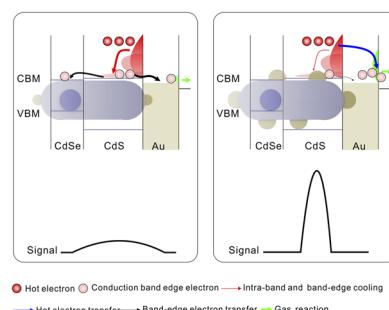
Wenbang Yang, Andrew J. P. White and Mark R. Crimmin*



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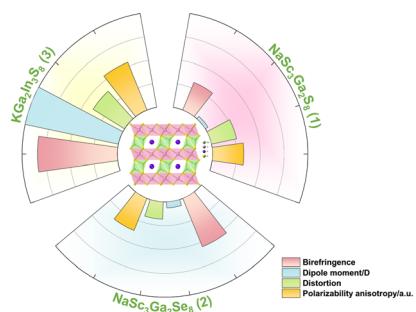
Harnessing non-equilibrium hot electrons in a quantum-engineered ternary heterostructure for sub-ppb C9 biomarker detection

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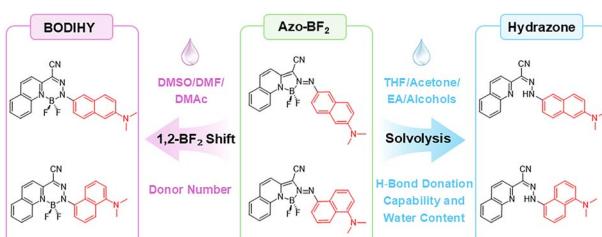
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From $\text{NaSc}_3\text{Ga}_2\text{Q}_8$ ($\text{Q} = \text{S}, \text{Se}$) to $\text{KGa}_2\text{In}_3\text{S}_8$: substitution of Sc^{3+} with In^{3+} to achieve doubled birefringence

Yun Xie, Wen-Dong Yao,* Qiu-Yang Du, Wenfeng Zhou, Nian-Tzu Suen, Wenlong Liu and Sheng-Ping Guo*

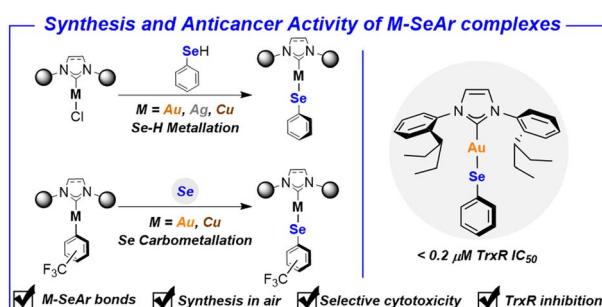
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Solvent-dependent reactivity of azo- BF_2 switches

Qingkai Qi, Heyifei Fu, Lingya Peng, Shefali Patra, Xiaogang Liu and Ivan Aprahamian*

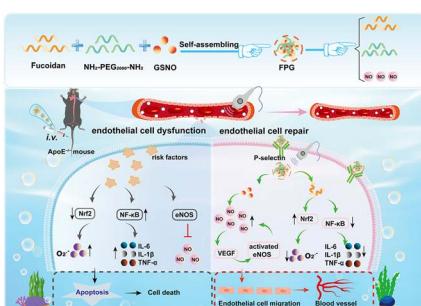
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A new generation of N-heterocyclic carbene (NHC) gold–selenolato complexes as potent anticancer agents: distinct synthetic routes and evaluation in 2D and 3D cancer models

Pierre Arnaut, Nestor Bracho Pozsoni, Denys Bondar, Petra Lippmann, Susanne Boschuk, Ivan Semenyuta, Subhrajyoti Bhandary, Kristof Van Hecke, Yevgen Karpichev, Enrico Cavarzerani, Vincenzo Canzonieri, Flavio Rizzolio, Thomas Scattolin, Georgios C. Vougioukalakis, Ingo Ott,* Nikolaos V. Tzouras* and Steven P. Nolan*

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A natural ultrasound-triggered nitric oxide booster for endothelial dysfunction therapy

Yuqiong Wang, Dong Meng, Yu Dong, Xiaoqing Huang, Liping Wang,* Wen Gao* and Bo Tang

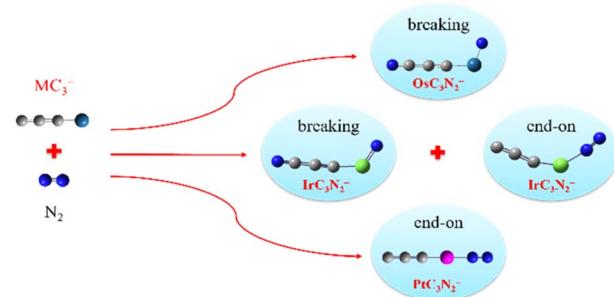


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Observation of competing nitrogen activation in metal tricarbon anions MC_3^- ($M = Os, Ir, Pt$)

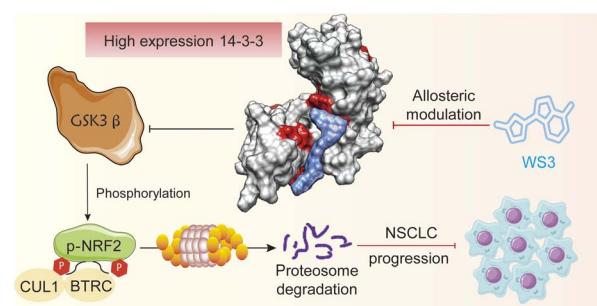
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and Ling Jiang



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Discovery of an allosteric 14-3-3 inhibitor for suppressing NRF2-driven cancer via phenotypic screening and chemoproteomic-based target deconvolution

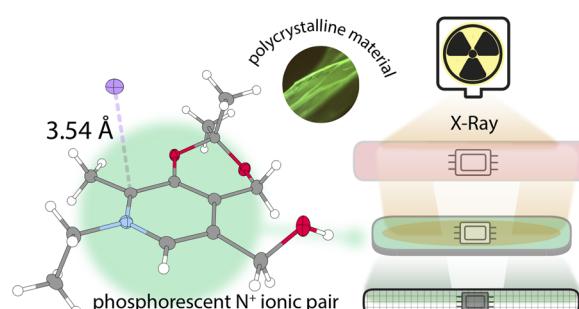
Jinglong Zhao, Han Jiang, Kaimei Zhao, Tian Liu,
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Mengchen Lu* and Zhengyu Jiang*



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Metal-free pyridinium salts with strong room-temperature phosphorescence and microsecond radiative lifetime

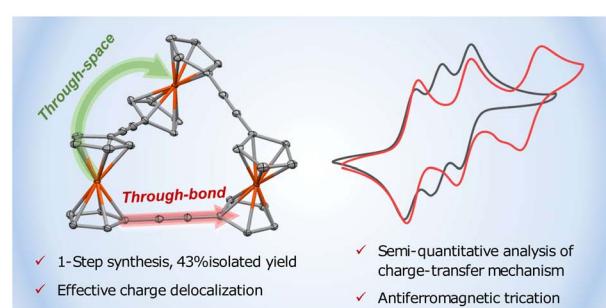
Eetu Hakkarainen, Hao-Cheng Lin, Anton A. Nechaev,*
Vsevolod A. Peshkov, Toni Eskelinen, Kai-Hsin Chang,
Tzu-Hao Liao, Po-Yu Chen, Igor O. Koshevoy,
Hao-Wu Lin,* Pi-Tai Chou* and Andrey Belyaev*



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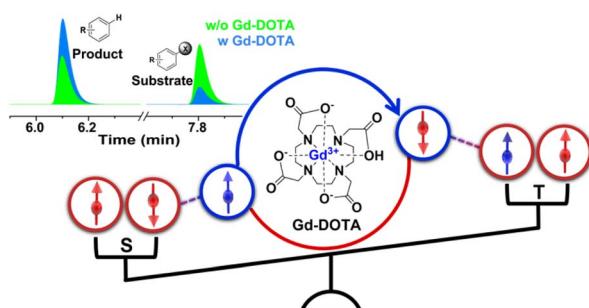
An acetylene-bridged ferrocene macrocycle: efficient synthesis and electron transfer mechanism in mixed-valence systems

Longfei Li, Beijing Zhang, Yi Xie, Qi Xiong, Yuanbo Zhong,
Yansong Jiang, Yu Wang, Haobing Wang, Shang-Da Jiang,
Shen Zhou* and Xing Jiang*



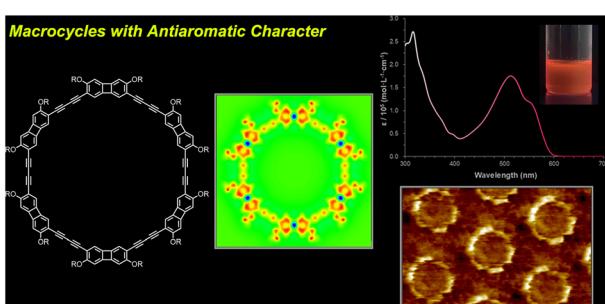
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**Enhancing photoredox catalysis by suppressing back electron transfer with the aid of a spin catalyst**

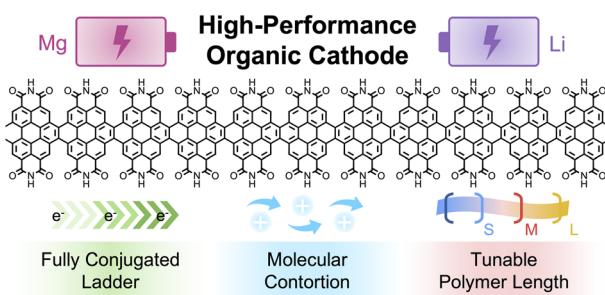
Zhiqiang Dong, Chenli Chen, Lingfang Chen, Mingli Sun, Junzheng Zhan, Shen Zhou, Lijia Cao, Jianyu Liu, Shuming Bai,* Jialong Jie,* Hongmei Su, Song Gao and Linan Zhou*

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Shoko Nagayama, Hiroki Kawakatsu, Daisuke Asai, Takumi Yokoyama, Masahiro Yamashina, Shinji Toyota and Kazukuni Tahara*

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Wenrui Lei, Kelsey Harrison, Si Tong Bao, Kyunam Lee, Michael L. Steigerwald, Qian Cheng,* Nicholas M. Orchanian,* Colin Nuckolls* and Qifeng Jiang*

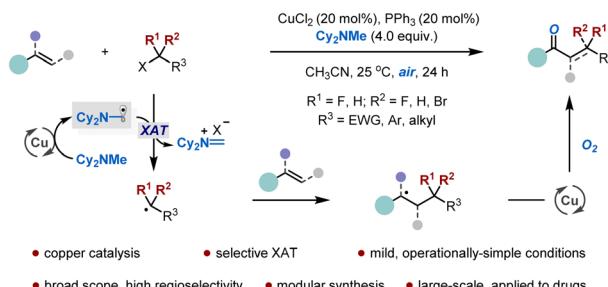
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**Molecular design of sensitizers for high-efficiency OLEDs: exploration of energy transfer dynamics**

Xiao Liu, Xue-liang Wen, Yang Zhou, Chao Tang, Diandong Tang, Qian Wang, Yibo Shi, Lin Liu, Wei Sun, Kai Feng, Wei-Hai Fang,* Juan Qiao,* Lin Shen* and Xuebo Chen*

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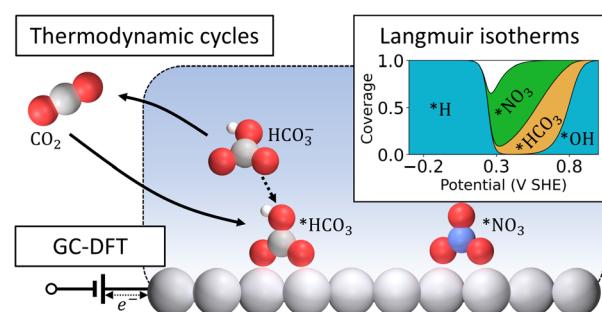
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Copper-catalysed oxy-alkylation of styrenes enabled by halogen-atom transferQiujuan Tan, Xiang Lyu, Yu Zhao, Huaquan Fang,*
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Predicting competitive anion electrosorption on late transition metals

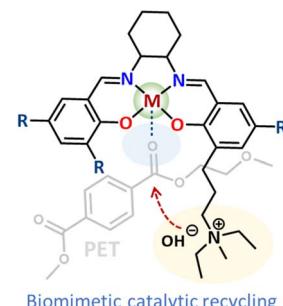
Bolton Tran* and Bryan R. Goldsmith



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Theory-guided multifunctional Zn-Salen molecular catalyst for sustainable polyester plastic recycling

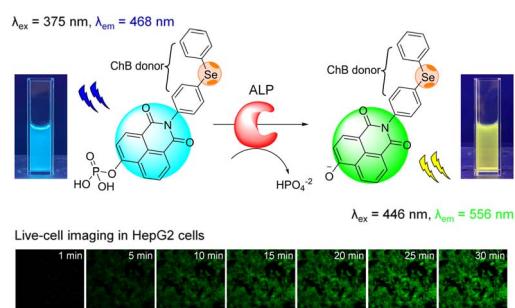
Mei Li, Yawen Shi, Lei Tang,* Na Ji* and Shengbo Zhang*



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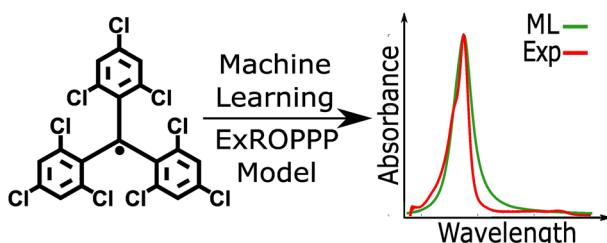
Tuning probe permeability via chalcogen and halogen atom substitution for monitoring alkaline phosphatase activity in mammalian cells

Ekta Chauhan, Debasish Giri, Harinarayana Ungati and Govindasamy Mugesh*



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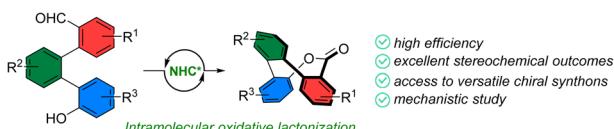
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Learning radical excited states from sparse data

Jingkun Shen, Lucy E. Walker, Kevin Ma, James D. Green, Hugo Bronstein, Keith T. Butler and Timothy J. H. Hele*

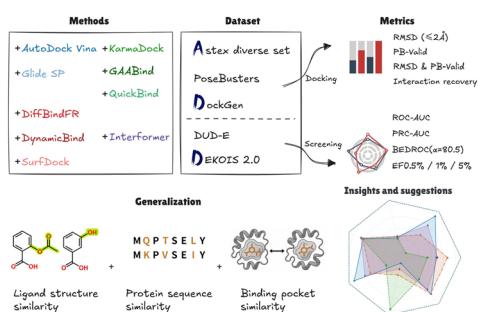
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Enantioselective lactonization catalyzed by chiral N-heterocyclic carbenes enables access to inherently chiral eight-membered lactones

Vojtěch Dočekal,* Adam Kurčina, Ivana Císařová and Jan Veselý*

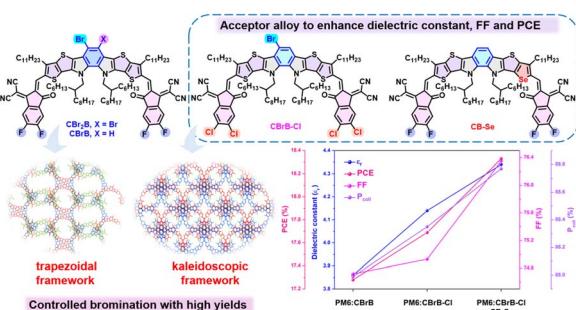
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Decoding the limits of deep learning in molecular docking for drug discovery

Yue Li, Jiacai Yi, Hui Li, Kun Li, Fenghua Kang, Youchao Deng, Chengkun Wu, Xiangzheng Fu, Dejun Jiang* and Dongsheng Cao*

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Effect of halogen/chalcogen substitution on the dielectric constant of asymmetric acceptor alloy to improve the efficiency and stability of inverted organic photovoltaics

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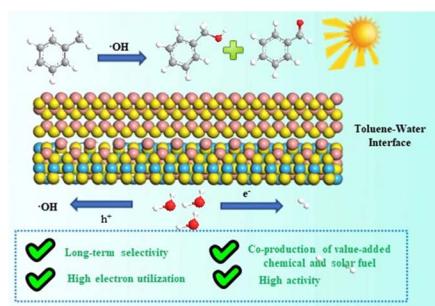


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Dynamic surface radical confinement in a compact CdS–CdIn₂S₄ semi-coherent heterojunction for highly efficient synergistic photocatalytic selective oxidation of toluene and enhanced hydrogen production

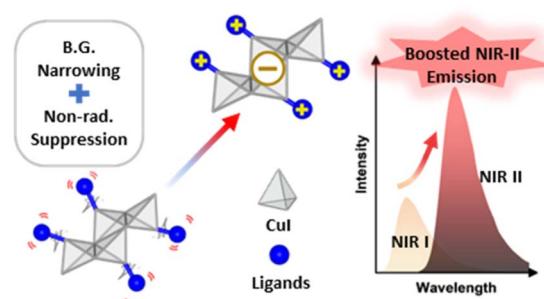
Yuhui Liu, Xiaoxu Deng,* Chuangyun Guo, Shuang-Feng Yin* and Peng Chen*



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Rigid cationic ligands enable high-efficiency NIR-II photoluminescence in copper(I) iodide hybrid semiconductors

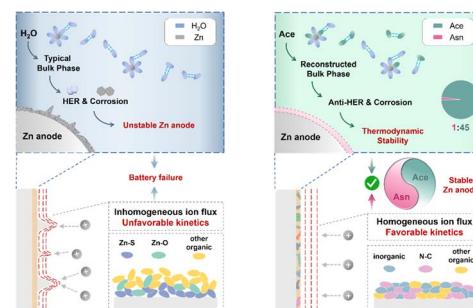
Jingwen Chen, Xueqian Wu, Minghui Zhang, Simon J. Teat, Guozhong Xu,* Jingbai Li,* Xiuze Hei* and Jing Li*



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Concentration-function coupled electrolytes harmonize thermodynamics and kinetics for stable zinc metal batteries

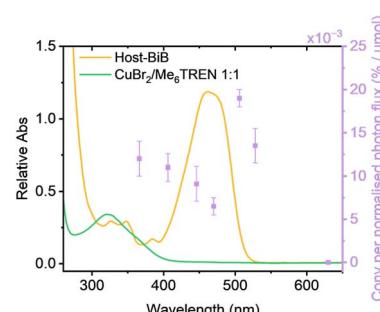
Tao Liu, Xusheng Dong, Jiashuo Zhang, Huihui Chen, Rongrong Cao, Zixu Sun, Wanhai Zhou, Hongpeng Li, Dongliang Chao, Zhen Zhou* and Ruizheng Zhao*



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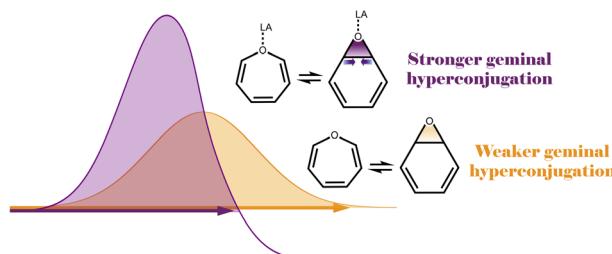
Visible-light-induced copper-mediated reversible deactivation radical polymerisation without additional photocatalysts

Mia D. Hall, Boyu Zhao, Evelina Liarou, Tanja Junkers* and David Haddleton*



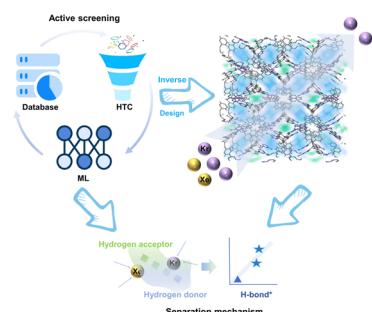
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**Geminal hyperconjugation as a driving force for C–C bond shortening in heavy-atom tunnelling**

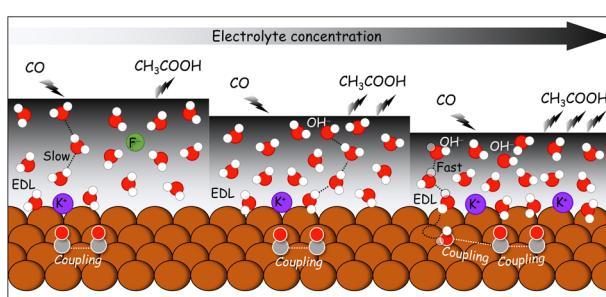
Croix J. Laconsay, Ishika Jain, Tim Schleif,* William L. Karney* and Judy I. Wu*

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**A mechanism-guided inverse engineering framework to unlock design principles of H-bonded organic frameworks for gas separation**

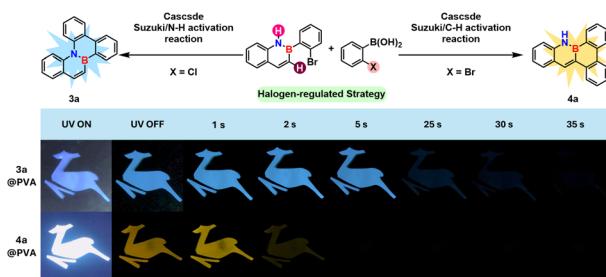
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**Atomic insights into how electrolyte concentration controls CO electroreduction to acetate**

Xiaowan Bai, Lin Jiang and Yan Jiao*

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**Regioselective construction of two isomeric BN-fused aromatic frameworks enabling the synthesis of ultralong room-temperature phosphorescence materials**

Qiang Feng, Junxiong Yao, Qianxin Wu, Yang Qiu, Zicheng Wang, Xia Wang, Weilin Chen, Sibo Tong, Xiaohua Cao, Jianqi Sun, Qianqian Ye, Jianhua Liu,* Dianyuan Wang,* Jianguo Wang* and Huanan Huang*



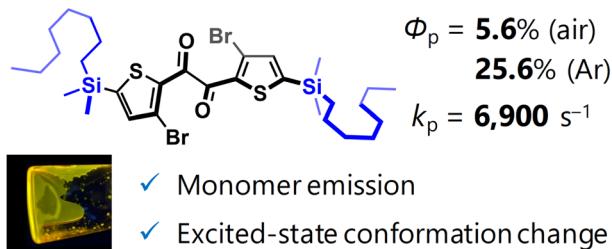
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Fast and efficient room-temperature phosphorescence from metal-free organic molecular liquids

Yosuke Tani,* Yuya Oshima, Rika Okada, Jun Fujimura, Yuji Miyazaki, Motohiro Nakano, Osamu Urakawa, Tadashi Inoue, Takumi Ehara, Kiyoshi Miyata, Ken Onda and Takuji Ogawa

Solvent-Free Liquid RTP



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Ultrastrong circularly polarized electroluminescence achieved by chiral co-assembly of a liquid crystal-functionalized carbazole derivative

Hang Li, Dong Li, Zhenhao Jiang, Yuxiang Wang* and Yixiang Cheng*



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The global kinetic–thermodynamic relationship derived from first principles

Eduardo Garcia-Padilla* and Guanqi Qiu*

full-range, exact kinetic-thermodynamic relationship fully deductive equation chemically meaningful parameters

